MOTOROLA TWO-WAY RADIOS

These radios are designed for heavy-duty, everyday industrial use. Environments such as construction, manufacturing and retail environments, along with many others, require this type of radio in order to function efficiently and productively.

XTN SERIES SINGLE CHANNEL

Features:

- Range up to 9.6 km/250,000 sq. ft. or up to 20 floors
- 2 watts
- 38 analog and 83 digital interference eliminator codes
- Waterproof, shockproof and drop-proof
- Designed to meet MilSpec810 and IP54 standards
- Cloning capabilities
- Manager lock
- Call tones
- Battery gauge
- Weight: 9.8 oz with NiMH battery

Included accessories:

- 1500 mAh NiMH rechargeable battery
- 10-hour plug-in charger
- Swivel belt holster with 3" spring clip

* Industry Canada Licence Required

Order No. HT172
Mfg. No. XU2103

HT172

XTN SERIES MULTI-CHANNEL 2-WATT

Features:

This version shares all the features of the **HT172**, in addition to the following:

- 5 additional channels
- Voice-activated, hands free operation (VOX) capability
- Preset channel access
- Scan

Included accessories:

- 1500 mAh NiMH rechargeable battery
- 10-hour plug-in charger
- Swivel belt holster with 3" spring clip

* Industry Canada Licence Required

Order No. HT171
Mfg. No. XU2603

HT171

CLS SERIES FOUR CHANNEL 1-WATT

Features:

- Up to 8 km range, 200,000 sq. ft. or 15 floors
- 1 watt UHF transmit power
- 2 frequencies
- Up to 4-channel operation
- 121 interference eliminator with 83 digital and 38 analog codes
- LCD display with battery meter, signal strength indicator
- *VibraCall*® alert feature
- Call Alert button with 3 call tones and Off
- Double pin accessory jack
- Compatible with XTN Series audio accessories
- VOX – Voice activated with select audio accessories

Included accessories:

- Lithium ion battery, up to 12 hours battery life
- 3-hr drop-in charger
- Swivel holster

* Industry Canada Licence Required

Order No. HX166
Mfg. No. CLS1413

HX166

TALKABOUT T9500R FRS/GMRS RECHARGE PACK

FEATURES:

- Uses both FRS and GMRS frequencies to provide more channels
- 1.5 watt power • Delivers a range of up to 40 kilometers
- *VibraCall*® (vibrate alert function) • NOAA / Weather Alert
- PTT (push to talk) Boost feature
- 22 channels, each with 121 privacy codes for 2662 combinations
- Dual Power: 27 hr. Alkaline and 9 hr. NiMH estimated talk time
- *iVOX* hands-free communication without accessory
- *QT*™ (Quiet Talk) interruption feature
- Backlit display
- LCD battery meter
- Audible low battery alert
- Keypad lock • 10 call tones
- Time-out timer • Priority scan
- Battery saver / Power saver
- Available in Black

INCLUDED ACCESSORIES:

- 2 radios • 2 belt clips
- 1 Dual Drop-in charger
- Charging Adapter • 2 PTT earbuds
- 2 NiMH rechargeable and battery packs

Order No. HX683
Mfg. No. T9500R

MOTOROLA

ACCESSORIES

Order No.	Mfg. No.	Description	Compatible With Series
BATTERIES			
HX066	53871	NiMH rechargeable battery	XTN
HX186	56557	Lithium ion rechargeable battery	CLS
CHARGER			
HX067	53874	10-hour wall charger	XTN
HX068	53872	10-hour drop-in charging tray	XTN
HX069	53875	2-hour drop-in charging tray	XTN
HX070	53879	Multi-unit cloning station and charger	XTN
HX180	56553	3-hr Drop-in Charger	CLS
HX181	56531	CCS Multi-Charging Station	CLS
HX182	56564	AAA Battery Tray	CLS
AUDIO ACCESSORIES			
HM015	53862	Remote speaker/microphone	XTN/CLS
HM017	53866	Earbud w/in-line push-to-talk button	XTN/CLS
HM005	53863	Earpiece w/microphone	XTN/CLS
HM004	53865	Headset w/swivel boom microphone	XTN/CLS
CARRY CASES & HOLSTERS			
HX071	53821	Replacement swivel belt holster	XTN
HX185	MR7000-20W	Hard leather carry case with swivel belt loop	XTN
HX183	56519	Carry case with adjustable strap	CLS
HX184	56532	Replacement swivel belt holster	CLS
IA033	58373	Leather carry case w/ plastic front	XTN

BIOSYSTEMS TOXIPRO® SINGLE GAS MONITOR

- Compact and rugged
- IP65/IP67 rated protection against water and dust ingress
- Over-moulded boot
- Large backlit display
- Top and front mounted bright LED alarm light
- One-button operation
- Optional built-in vibrating alarm
- Loud alarm
- Exceeds IEC 6100-4-3 for level 3 RFI immunity specifications

SPERIAN

HX667

Order No.	Mfg. No.	Description
HX667	54-45-90	O_2
HX668	54-45-01	CO
HX669	54-45-02	H_2S
HX670	54-45-03	SO_2

MULTIPRO IQ EXPRESS DOCKING STATION

- The *MultiPro IQ Express* docking station is an automatic calibration station and data download centre for the *MultiPro* gas detector
- Just drop the detector into the dock and the *MultiPro IQ Express* does the rest
- The *MultiPro IQ Express* is a fully automated bump test station that performs up to eight critical tests every time an instrument is placed in the dock
- Automatic instrument identification
- Automatic Ready/Fault indication
- If an instrument fails the bump test, the *MultiPro IQ Express* will automatically initiate a full span calibration without further intervention from the user
- Docks can operate as independent calibration stations
- Docks can be connected to a PC via USB

SPERIAN

IQ

HX677

Order No.	Mfg. No.	Description
HX677	54-49-9000	*MultiPro IQ* Docking Station

SOLARIS® MULTI-GAS DETECTORS

MSA

- Four-in-one gas detector displays all gas readings simultaneously
- Small and lightweight unit can be comfortably worn all day
- Triple alarm system provides visual, audible and vibrating alarms as standard features
- Rubberized armor casing offers protection from accidental impact
- IP 65 rating ensures reliable performance in harsh environments
- User configuration for alarm set points, calibration gas values and industrial hygiene functions
- UL, CUL, CSA and MSHA approved
- 2-year all-inclusive warranty

HX555

Order No.	Mfg. No.	Description
BASIC KITS		
HX555	10058051	4-Gas Instrument
HX556	10058055	3-Gas (LEL, O_2, CO)
HX557	10058057	3-Gas (LEL, O_2, H_2S)
STANDARD KITS (INCLUDES DATALOGGING OPTION)		
HX559	10058054	4-Gas Instrument
HX560	10058056	3-Gas (LEL, O_2, CO)
HX561	10058058	3-Gas (LEL, O_2, H_2S)

MULTIPRO™ MULTI-GAS DETECTOR

- This compact and ruggedly constructed multi-gas detector is packed with features
- One-button operation and calibration
- Audible and visual alarm
- Real time reading
- Easy-to-read front-mounted backlit display
- Over-moulded boot
- Optional slip-on sampling pump

SPERIAN

HX665

Order No.	Mfg. No.	Description
HX665	54-48-314A	4-Gas Basic, Alkaline Battery
HX666	54-49-102	Sample Pump, Continuous, w/10' Tubing, for *MultiPro™* Gas Detector

TOXIPRO/LTD IQ EXPRESS DOCKING STATION

- Automatic calibration station and data download centre for the *ToxiPro* and *ToxiLtd* single sensor gas detectors
- Drop the detector into the *IQ Express* and the *IQ Express* does the rest in as little as 20 seconds†
- Automatic instrument identification
- The IQ Express is a fully automated bump test station that performs up to eight critical tests every time an instrument is placed in the dock
- Total processing time with a full span calibration is still under one minute
- Docks can operate as independent calibration stations
- If an instrument fails the bump test, the *IQ Express* will automatically initiate a full span calibration without further intervention from the user
- Docks can be connected to a PC via USB or via network

† O_2, CO and H_2S models. Other sensor types may take longer.

SPERIAN

IQ

HX675

Order No.	Mfg. No.	Description
HX675	54-46-9000	*ToxiPro/LTD IQ* Docking Station

ALTAIR™ SINGLE-GAS DETECTORS

- Innovative CO, H_2S or O_2 detectors operate for over two years maintenance-free (1080 alarm minutes)
- Triple alarm system provides visual, audible and standard vibrating alarms
- One-button operation with no sensor or battery changes necessary
- Rubberized armor housing provides extra durability
- Easy bump check and built-in calibration feature
- Event recorder stores 25 latest events automatically in instrument memory
- Rated to IP67 for dust and water ingress, great RFI performance.
- Factory-calibrated detector with warranted two-year service life (1080 alarm minutes)
- Class 1, Div 1, Groups A, B, C & D approved

MSA

SAO780

Order No.	Mfg. No.	Description
SAO780	10070749	H_2S
SAO781	10070750	CO
SAO782	10070791	O_2

GALAXY™ AUTOMATED TEST SYSTEMS

- Simply place the instrument in the test stand and the system performs the test automatically; no user intervention is required
- Completely standalone; it does not require a computer or network interface for any mode of operation
- For the fully-featured version of *Galaxy*™ automated test system, an optional network interface is available for either wired (Ethernet) or wireless (802.11b) networks
- Any web Navigator can be used to access the data of a network-enabled *Galaxy*™ automated test system
- Calibration and bump check records, due date for instrument calibration, and the ability to email *MSA* directly for support are just a few of the capabilities of this interface
- Kits below include regulator and cylinder holder
- Other system kits available

Order No.	Mfg. No.	Instrument Type
SAO785	10061785	*Solaris*® Galaxy kit
SAO786	10061812	*Sirius*® Galaxy kit
SAO787	10061827	*Orion*® Galaxy kit

SAO785

HX545

ORION® MULTI-GAS DETECTORS

- Low-cost, reliable, and easy-to-use portable instrument
- Detects the presence of O_2, H_2S, CO and combustible gas
- One-button calibration
- Long-life battery
- Carbon-filled nylon case
- Tough, durable construction
- Built-in pump
- *TIM*® system compatibility
- Large, easy-to-read display
- Durable sensors
- *Link*™ software compatibility

ORION® DETECTOR OPTION KITS

Order No.	Mfg. No.	Description	LEL	O_2	CO	H_2S	NiMH Battery & Charger	Alkaline Battery	Calibration Cap	Internal Pump	10 ft. Line	1 ft. Probe	Orange Cordura Case	Calibration Kit	Black Economy Case	Boot
HX545	10030399	Deluxe 4-gas, Datalog	•	•	•	•	•			•	•	•	•	•	•	•
HX546	10025932	Deluxe 4-gas	•	•	•	•	•			•	•	•	•	•	•	•
HX547	10025935	Deluxe 3-gas H_2S	•	•		•	•			•	•	•	•	•	•	•
HX548	10025938	Deluxe 3-gas CO	•	•	•		•			•	•	•	•	•	•	•
HX124	10025931	Industrial 4-gas	•	•	•	•	•			•	•	•	•			•
HX549	10030420	Industrial 4-gas, less jacket	•	•	•	•	•			•	•	•	•			•
HX550	10025934	Industrial 3-gas H_2S	•	•		•	•			•	•	•	•			•
HX551	10025937	Industrial 3-gas CO	•	•	•		•			•	•	•	•			•
HX552	10030398	Economy 4-gas, NiMH	•	•	•	•		•	•							
HX110	10025930	Economy 4-gas	•	•	•	•		•	•							
HX553	10025933	Economy 3-gas H_2S	•	•		•		•	•							
HX554	10025936	Economy 3-gas CO	•	•	•				•	•						

Orion® detectors can be ordered in one of two convenient ways. Either select from the most popular kit combinations above, or contact us in regard to MSA's "Assemble-to-Order" process.

KWIK-DRAW® DETECTOR TUBE PUMPS

- *Kwik-Draw*® pumps can be used with an assortment of detector tubes
- Used for spot-testing atmospheres for toxic substances
- One-hand operation
- Consistent delivery of a sample draw volume of 100 ml

Order No.	Mfg. No.	Description
HX590	488543	*Kwik-Draw*® Basic Pump with Remote Sampling Adapter and Carrying Pouch
HX591	487500	*Kwik-Draw*® Deluxe Pump with Remote Sampling Adapter, Carrying Pouch and End-of-Stroke Indicator

ACCESSORIES

Order No.	Mfg. No.	Description
HX592	73067	Sampling Line, 10 ft
HX593	73068	Sampling Line, 25 ft
HX594	73069	Sampling Line, 50 ft
HX595	87970	Remote Sampling Adapter, required for Sampling Lines
HX596	488780	Solvent Resistant Sampling Line, 25 ft with reel
HX597	488872	Tube Holder, required for 488780 (HX596) Sampling Line
HX598	470321	Flue Gas Kit
HX599	813929	Detector Tube Handbook

DETECTOR TUBES

- All sets are sold in packages of 10 tubes
- Detector tubes for other gases/vapours are available upon request. Contact us with the details on the substance you need to measure

Order No.	Mfg. No.	Substance Measured	Detector Tube Applicable	Measuring Range (ppm)	Threshold Limit Value 1198 ACGIH (ppm)
HX611	497649	Acetaldehyde	Formaldehyde-0.1	5-50	25 (ceiling)
HX612	804405	Ammonia	NH_3-2	2-500	25
HX613	800300	Ammonia	NH_3-20	20-1000	
HX614	804589	n-Butyl mercaptan	Ethylmercaptan-0.5	1.5-15	0.5
HX614	804589	t-Butyl mercaptan	Ethylmercaptan-0.5	0.8-5	-
HX615	497606	Carbon Dioxide	CO_2-100	100-3000	5000
HX616	487333	Carbon Dioxide	CO_2-0.1%	0.1-70 Vol.-%	
HX617	803943	Carbon Monoxide	CO-5	5-1000	25
HX618	487334	Carbon Monoxide	CO-10	10-3000	
HX619	487335	Carbon Monoxide	CO-0.3%	0.3-7.0 Vol.-%	
HX620	804133	Chlorine	ClO_2-0.05	1-46	0.5
HX620	804133	Chlorine Dioxide	ClO_2-0.05	0.05-15	0.1
HX614	804589	Ethyl mercaptan	Ethylmercaptan-0.5	0.5-80	0.5
HX621	492870	Gasoline	Gasoline-30	300	
HX622	803945	Hydrogen Cyanide	HCN-2	2-50	4.7 (ceiling)
HX623	804142	Hydrogen Fluoride	HF-1	1-50	3 (ceiling)
HX624	487339	Hydrogen Sulfide	H_2S-1	1-200	10
HX625	487340	Hydrogen Sulfide	H_2S-100	100-4000	-
HX614	804589	Isopropyl mercaptan	Ethylmercaptan-0.5	0.5-5.5	-
HX614	804589	Methyl mercaptan	Ethylmercaptan-0.5	0.5-5	0.5
HX626	804140	Ozone	Ozone-0.05	0.05-5	0.05 (ceiling)
HX614	804589	n-Propyl mercaptan	Ethylmercaptan-0.5	0.7-8.0	-
HX627	804135	Styrene	Styrene-10	10-300	20
HX628	487338	Sulfur Dioxide	SO_2-1	0.5-25	2
HX629	497662	Sulfur Dioxide	SO_2-5	5-120	

DETECTOR TUBE INDUSTRY ACTION SETS

• All sets are sold in boxes of 12 tubes

Order No.	Mfg. No.	Set Description
HX600	655864	Agricultural
HX601	655868	Pulp and Paper
HX602	710981	Indoor Air Quality
HX603	655869	Pharmaceutical
HX604	655865	Petroleum
HX605	655867	Mining
HX606	655866	Synthetics
HX607	655933	Chemical Vapour Deposit
HX608	655934	Etching Process
HX609	655935	Epitaxy Process
HX610	655931	Crystal Growth Process

AGRICULTURAL SET
4 x Phosphine
2 x Sulfur Dioxide
4 x Methyl Bromide
2 x Hydrogen Cyanide
Order No. HX600

PULP & PAPER SET
3 x Chlorine Dioxide
2 x Sulfur Dioxide
3 x Hydrogen Sulfide
2 x Chlorine
2 x Ozone
Order No. HX601

INDOOR AIR QUALITY SET
2 x Carbon Monoxide
2 x Carbon Dioxide
2 x Formaldehyde
4 x Ozone
2 x H_2O (Relative humidity)
Order No. HX602

PHARMACEUTICAL SET
3 x Acetic Acid
3 x Aromatic HC
3 x Qualitest*
3 x Hydrogen Cyanide
Order No. HX603

PETROLEUM SET
2 x Hydrogen Sulfide
2 x Carbon Monoxide
2 x Qualitest*
4 x Benzene
2 x Hexane
Order No. HX604

MINING SET
3 x Carbon Monoxide
2 x Nitrogen Dioxide
3 x Nitrous Fumes
4 x Natural Gas/Methane
Order No. HX605

SYNTHETICS MANUFACTURING SET
2 x Toluene
4 x Qualitest*
2 x Ethanol
2 x Vinyl Chloride
2 x Trichloroethylene
Order No. HX606

***Qualitest:** General gas detection tube for combustible gases

SEMICONDUCTOR SETS CHEMICAL VAPOUR DEPOSITION PROCESS
3 x Ammonia Tubes
3 x CO_2 Tubes
3 x Nitrous fumes Tubes
3 x H_2S Tubes
Order No. HX607

ETCHING PROCESS
4 x Ammonia Tubes
4 x Chlorine Tubes
4 x Hydrogen Chlorine Tubes
Order No. HX608

EPITAXY PROCESS
3 x CO Tubes
3 x Hydrogen Chloride Tubes
3 x Phosphine Tubes
3 x Phosgene Tubes
Order No. HX609

CRYSTAL GROWTH PROCESS
6 x Phosgene Tubes
6 x Phosphine Tubes
Order No. HX610

See pages 123 to 126 for MSA respirators

Canada's Premier Source for Hand Protection

Coated

Chemical

Leather

Disposable

Winter

Welding

ZENITH

GRADUATED CYLINDERS

METHYL - PENTENE POLYMER

Graduated cylinders are crystal clear and shatterproof. Single scale with raised numeral graduations. Wide bases make cylinders tip-proof. Superior chemical resistance, heat-resistant to 350°F (177°C), no meniscus.

Order No.	Mfg. No.	Cap. ml	Subdiv. ml
HF625	F28690	10	0.2
HF626	F28691	25	0.5
HF627	F28692	50	1
HF629	F28694	250	2
HF630	F28695	500	5
HF631	F28696	1000	10

POLYPROPYLENE

Graduated cylinders have a single scale with raised numeral graduations for easy reading. Octagonal bases make cylinders roll-proof and stable. Non-wetting polypropylene surface creates no meniscus, making reading easier and more accurate. Polypropylene has excellent chemical resistance and is steam autoclavable at 250°F (121°C). Easily converted to mixing cylinders by using polypropylene stoppers.

Order No.	Mfg. No.	Cap. ml	Subdiv. ml
HF618	F28452	10	0.1
HF619	F28453	25	0.5
HF620	F28454	50	1
HF621	F28455	100	1
HF622	F28456	250	2
HF623	F28457	500	5
HF624	F28458	1000	10

COLOUR CODED SAFETY WASH BOTTLES

POLYETHYLENE

Resilient polyethylene bottles are easy to squeeze and return to original shape when released. Bottles feature integrally moulded screw cap and dispensing tube which are available in a choice of three colours. Colours are useful in identifying contents, labs or users. Tapered tip gives a fine stream. Heavier flow is possible by cutting back dispenser tip.

Order No.	Mfg. No.	Colour	Cap ml/oz.	Closure mm
HF753	H116130004	Red	125/4	24
HF754	H116130008	Red	250/8	24
HF755	H116130016	Red	500/16	28
HF756	H116130032	Red	1000/32	48
HF758	H116140008	Yellow	250/8	24
HF759	H116140016	Yellow	500/16	28
HF760	H116140032	Yellow	1000/32	38
HF761	H116150004	Blue	125/4	24
HF762	H116150008	Blue	250/8	24
HF763	H116150016	Blue	500/16	28
HF764	H116150032	Blue	1000/32	38

SMOKE CANDLES

STUDYING AIR FLOW

Smoke mixed with air or gases simplifies the observation of flow patterns in all types of apparatus or wind tunnels, indoor and outdoor areas, to mention a few applications. Heating and air conditioning units can be properly balanced by observing the discharge from grilles or registers and adjusting until satisfactory. Smoke candles are recommended for checking relatively small air capacity units such as exhaust fans.

DETECTING LEAKS

Highly visible smoke readily blends with air and gases, simplifying the observation of airflow patterns or quickly pinpointing leaks. It does not support combustion or leave a visible residue. Leaks visible without smoke can instantly be seen after smoke is added. The odour of escaping smoke also assists in pinpointing leaks. The tedious and time consuming soaping of piping systems and duct work for leaks can be eliminated by inducing sufficient smoke to fill an area approximately twice as large as the area being tested.

HA771 - SMOKE CANDLE
Burns for approximately thirty seconds and generates 4000 cubic feet of smoke. Size: 1 1/2" x 1 1/2"

HB406 - SMOKE CANDLE
Burns for one minute generating 8000 cubic feet of smoke. Size: 1 1/2" x 6"

HB843 - SMOKE BOMB
Generates a big 40,000 cubic feet of smoke while burning for 2 to 3 minutes. Size: 1 1/2" x 6"

HL766 - SMOKE BOMB
Generates 40,000 cubic feet of smoke over a period of 3 minutes. Double-wicked, furnished with clips for attaching multiple units thereby extending smoke-generating time.

Order No.	Mfg. No.	Description
HA771	1A	Smoke Candles, 1 dozen
HB406	2B	Smoke Candles, 1 dozen
HB843	3C	Smoke Bombs, 1 dozen
HL766	WC3	Double Wicked Smoke Bombs, 1 dozen

LONG HANDLED DIPPERS

POLYETHYLENE

High density polyethylene dippers for sampling from large vats or deep tanks do not corrode or contaminate solutions. 1 1/8" (29 mm) diameter handle is attached to the bowl at a 45° angle and has an end hole for hanging. 12 foot handle is available in one piece or two piece screw-together construction. Other types and sizes made to order.

Order No.	Mfg. No.	Handle Length
16 OZ. BOWL (500 CC):		
HF648	F367800016	3 ft/91 cm
HF650	F367810016	6 ft/183 cm
HF652	F367820016	12 ft/366 cm
32 OZ. BOWL (1000 CC):		
HF649	F367800032	3 ft/91 cm
HF651	F367810032	6 ft/183 cm
HF653	F367820032	12 ft/366 cm

FIRST RESPONSE™ GENERAL PURPOSE SMOKE DETECTOR

- Battery powered, 9 V battery (included)
- Suitable for all rooms
- Dual-ionization technology
- Alarm and power test feature
- Operating LED
- Up to 30 days low battery warning
- Battery removal indicator
- Easy installation, mounting hardware included
- 10-year limited warranty (battery excluded)
- Meets applicable standards, ULC listed

AMERICAN SENSORS™/MC

Order No.	Mfg. No.	Description	Dimensions Dia."	x	D"
SAI776	SF200	Battery Powered	4.4	x	1.5
XB876	EN22	Replacement battery, 9 V, 12/pkg			

CARBON MONOXIDE DETECTORS

- Advanced semiconductor sensing technology
- Instant test/reset feature
- Self-diagnosing circuitry
- Power and alarm light indicators
- Emergency alarm
- Loud 85 dB alarm pattern
- No batteries or replacement sensor required
- Available in 120 V AC plug-in or hardwire
- **SD531** comes with standard and octagon mounting plates
- 5-year limited warranty
- ULC listed, CSA approved

AMERICAN SENSORS™/MC

CONSTANTLY MONITORS THE AIR TO MEASURE CO LEVELS!

Order No.	Mfg. No.	Description	Dimensions W"	x	D"	x	H"
SD530	CO800	Plug-In	3	x	1.7	x	5
SD531	C0810	Hardwire	3	x	1.7	x	5

PROPANE GAS DETECTOR

- Monitors, detects, and measures the concentration of propane gas
- Unit is easy to install - simply plug into any standard 120 V AC wall outlet (requires no batteries)
- Loud 85 dB alarm is set to alarm before gas levels reach 25% of lower explosive level
- Instant test feature and self-diagnosing circuitry
- Power and alarm light indicator
- 5-year comprehensive warranty
- Listed to ULC and CSA standards

AMERICAN SENSORS™/MC

Order No.	Mfg. No.	Description	Dimensions D"	x	W"	x	H"
SD534	LP200	Plug-In	1.4	x	6.5	x	3.5

NATURAL GAS DETECTOR

- Measures the concentration of natural gas
- Install by simply plugging into any standard 120 V AC wall outlet (requires no batteries)
- Loud 85 dB alarm is set to alarm before gas levels reach 25% of lower explosive level
- Includes a power and alarm light indicator
- Instant test feature and self-diagnosing circuitry
- 5-year comprehensive warranty
- Listed to ULC and CSA standards

AMERICAN SENSORS™/MC

Order No.	Mfg. No.	Description	Dimensions D"	x	W"	x	H"
SD536	NG200	Plug-In	1.375	x	6.5	x	3.5

ELECTROMAGNETIC FIELD METER

- Measure electromagnetic radiation from video terminals, fans, faulty wiring, power lines and other equipment
- Measurement range: 0.1 mG to 199.9 mG
- Frequency band width: 30 to 300 Hz (ELF frequency/range)
- 3 1/2 digit LCD, 1/2" (13 mm) high
- Single axis with an accuracy of ±4% at 50-60 Hz
- Sampling rate of 2.5 times/second and overrange indication
- Dimensions/Weight: 135 x 75 x 25 mm/170 g
- Operates on a single 9 V alkaline battery

Order No. HX274
Mfg. No. EMF-822A

CARBON MONOXIDE METER

- Highly accurate with fast response time
- Measuring range from 1 to 1000 PPM with a 1 PPM resolution
- ±5% or ±10 PPM basic accuracy (whichever is greater)
- Max, Data hold and Auto shut off
- Utilizes a stabilized electrochemical gas specific fast response sensor
- Audible alarm starts at 35 PPM
- Backlight LCD display
- Dimensions/Weight: 160 x 56 x 40 mm/180 g
- Complete with 9 V battery and carrying case

Order No. HX361
Mfg. No. CO-180

REED

FLAMMABLE GAS LEAK DETECTOR

REED

- Detectable gases: Natural gas and propane/butane
- Conforms to the National and European guidelines
- Optimal operating temperature/humidity: 10 to 50°C, 95% RH or lower
- Operates on two 1.5 V "AAA" batteries
- Batteries provide 4 hours of continuous use
- Dimensions/Weight: 164 x 21 mm/25 g

Order No. HX362 ***Mfg. No.*** GD3000

SMOKE PUFFER

One of the most convenient and widely used smoke sources. Provides smoke on demand. Simply squeeze the rubber bulb handle for discrete puffs or a continuous stream.

Each reload smoke tube produces 250 to 500 puffs of smoke. After use, unused smoke left in tube is preserved by capping with a breech plug. Sealed glass smoke tubes can be stored indefinitely.

Supplied in a convenient carrying case.

Order No.	Mfg. No.	Description
HF586	9020186	*Smoke Puffer* w/ 10 Smoke Tubes
HF587	9020187	Spare Smoke Tubes, Pkg. of 10
IA005	9020188	Spare Rubber Puffer Bulb

LEAK DETECTION COMPOUNDS

Scientifically formulated to provide instant leak detection results. To locate leaks, simply apply a small stream of leak detection compound towards area being inspected. Compound spreads quickly to provide lasting bubbles or foam at leakage point.

HA149 is ideal for compressed air and gaseous systems testing. Application with a 12" extension tube is quick and easy. A viscosity additive ensures adherence to the surface being tested, providing a longer inspection period. Temperature range: 32° to 200°F/0° to 93°C.

HB464 is formulated for oxygen system testing. Meets Military Specification MIL-L-22567 Type 1. Provides safe, oxygen compatible leak detection results in the location of oxygen leakage. Temperature range: 27° to 200°F/-3° to 93°C.

- No residue
- Non-corrosive
- Non-toxic
- Non-Flammable

Order No.	Mfg. No.	Description
HA149	100/B	Leak Detection Compound, 1 dozen, 8 oz
HB464	300	Leak Detection Compound, 1 dozen, 8 oz

SOUND LEVEL METER

- Meets IEC 651 Type 1 specifications
- 3 Ranges, 30 to 130 dB,
- MAX HOLD, DATA HOLD
- A/C frequency weighting
- Fast/Slow time weighting
- AC output
- Internal 94 dB calibration

Order No. HN404 ***Mfg. No.*** SL-4022

SPECIFICATIONS

Measuring Range:	30 to 130 dB
Resolution:	0.1 dB
Frequency:	31.5 Hz to 8 kHz
Accuracy:	±1.5 dB
Time Weighting:	Fast/Slow (A & C)
Microphone:	1/2" electret condenser
Output:	AC output
Certifications:	IEC 651 Type 1
Power Supply:	2 x 9V battery
Dimensions:	260 x 87 x 36 mm
Weight:	450g

SOUND LEVEL METER

- Meets IEC 651 Type 2 specifications
- 3 Ranges, 35 to 130 dB
- "A" frequency weighting
- Fast time weighting
- Data Hold

Order No. HN405 ***Mfg. No.*** SL-4010

SPECIFICATIONS

Measuring Range:	35 to 130 dB (A)
Resolution:	0.1 dB
Frequency:	31.5 Hz to 8 kHz
Accuracy:	±1.5 dB
Time Weighting:	Fast
Microphone:	1/2" electret condenser
Output:	-
Certifications:	IEC 651 Type 2
Power Supply:	1 x 9V battery
Dimensions:	250 x 70 x 28 mm
Weight:	250g

SOUND LEVEL METER

- Designed to meet IEC 651 Type 1, DIN 45633, JIS 1502
- 1/2" electric condenser microphone
- Large, easy-to-read LCD readout
- Meter response changing switch
- Function control makes A and C weighted measurements
- MAX HOLD function to store peak values
- 50 dB steps with over/under range indications
- Internal oscillation system
- Calibration potentiometer
- Output socket provided for connection to recorders, analyzers, etc
- Measuring Range: 30 to 130 dB(A); 35 to 130 dB(C)

Order No. HF978 ***Mfg. No.*** K7010

SPECIFICATIONS:

Measuring Range:	30 to 130 dB(A); 35 to 130 dB(C)
Resolution:	0.1 dB
Accuracy:	±0.7 dB after calibration @ 94 dB/1000 Hz
Frequency Range:	31.5 to 8000 Hz
Response Time:	Fast: 0.2 sec. for max. Slow: 1.5 sec. for max.
Calibration:	Internal oscillation, 1kHz square wave generator
Output:	0.5 VAC rms f.s., 0.3-1.3 VDC, 10mV/dB
Impedance:	600 ohms
Display:	3-1/2 digit 18mm LCD
Power Supply:	1 x 9V 006P battery
Environmental:	0 to 50°C ; Max. 90% R.H.
Dimensions:	205 x 80 x 35 mm; 12.7 mm dia. microphone
Weight:	280 g

SOUND LEVEL METER

- Direct reading analog decibel scale, 40 to 120 dB
- "A" frequency weighting attenuates lower frequency noise levels
- Built-in filter simulates response of the human ear
- Easy to use and easy to read
- One button operation
- Taut band meter movement
- Pocket size portability
- Inexpensive... yet rugged construction
- Includes battery

Order No. HK708 ***Mfg. No.*** SL-120

CARRYING CASE ***Order No. HN413***

SPECIFICATIONS

Measuring Range:	40 to 120 dB (A)
Resolution:	-
Frequency:	2 to 5 kHz
Accuracy:	±2 dB
Time Weighting:	Slow
Microphone:	Capacitative
Output:	-
Certifications:	ANSI S1.4 1983 Type 2 and IEC 651 Type 2 graph A
Power Supply:	1 x 2.7V "PX14" battery
Dimensions:	145 x 50 x 30 mm
Weight:	100g

OPTIONAL ACCESSORIES

HN406

- Professional, 1 KHz/94 dB
- Diecasting aluminum alloy housing case
- DC, 9V batteries x 2 pcs
- Size: 50 mm dia. x 82 mm

HN406

HN408

HN408

- Wind shield ball for sound level microphones
- Available for SL-4001, SL-4010, SL-4011 & SL-4022
- Size: 65 mm dia.

Order No.	Mfg. No.	Description
HN406	SC-941	94 dB Sound Calibrator
HN408	SB-01	Wind Shield Ball
HX312	SW-U801-WIN	Software
HX316	UPCB-02	RS-232 Cable
HN416	CA-05A	Soft Carrying Case

DIGITAL CONTACT/PHOTO TACHOMETER

A multifunctional unit combining both contact and non-contact measurement of RPM.

- Wide range of measurement
- Contact measurement in unit of RPM or in surface speed (i.e. ft/min and m/min)
- High precision
- Last Value, Min, Max w/memory recall button
- Fast sampling time
- Quartz crystal time-base
- Floating demimal
- Includes battery and carrying case

Order No. HF964

Mfg. No.	K4010
Photo Mode:	5 to 99,999 RPM
Contact Mode:	0.5 to 19,999 RPM
Surface Speed:	0.05 to 1,999 MPM/0.2 to 6560 FPM
Accuracy:	±(0.05% + 1 digit)
Display:	5-digit LCD
Sampling Rate:	1/second
Memory:	Min/Max, last value

PH/MV/TEMPERATURE METER

- Dual display for pH or mV and temperature
- °C/°F switchable
- Large LCD with 36mm (1.4") high digits
- MAX/MIN/AVG readings stored in memory
- Automatic display hold and out of range indications
- Manual or automatic temperature compensation
- RS-232 serial interface
- Optional data acquisition software
- pH Range/Resolution/Accuracy: 0 to 14 pH/0.01 pH/±(0.03% + 2 digits)
- mV Range/Resolution/Accuracy: 0 to 1999 mV/1.0 mV/±(0.5% + 1 digit)
- Temp. Range/Resolution/Accuracy: 0 to 50°C (32 to 122°F) pH / 0.1°C (0.1°F)/±1°C (±1.8°F)

Order No. HX300
Mfg. No. PH-207

DIGITAL AUTORANGING ILLUMINOMETER

- Measures to 20,000 Lux; 2,000 Fc
- Auto-ranging
- User selectable Lux/Footcandles
- Min/Max and Data hold function
- Auto shut off and zero adjustment button
- Over range and low battery indication
- Battery included

Order No. HX288

Mfg. No.	LM-81LX
Measuring Range:	0 to 20,000 lux; 0 to 2,000 Fc
Resolution:	1, 10 lux; 0.1, 1 Fc
Accuracy:	±5%
Display:	LCD
Sampling Rate:	1 time/second
Power Supply:	1 x 9V battery
Dimensions:	156 x 60 x 33 mm
Weight:	160 g

DIGITAL PHOTO TACHOMETER

A laser light source provides for improved accuracy of RPM measurements.

- Non-contact measurement of RPM of rotating objects facilitated by integral light beam
- Recalls Max/Min and last values
- Large, easy to read display
- Autoranging with 0.05% accuracy
- Includes battery and carrying case

Order No. HX385

Mfg. No.	ST-6234B
Photo Mode:	2.5 to 99,999 RPM
Accuracy:	±(0.05% + 1 digit)
Display:	5-digit LCD

DIGITAL CONTACT/PHOTO TACHOMETER

Fast and accurate RPM and surface speed measurements of rotating objects.

- Dual function unit with both contact and non-contact capabilities
- Supplied with adaptors FPM, RPM and surface speed mesurements
- Non-contact function utilizes laser light beam for improved accuracy
- Recalls Max/Min and last values
- Large, easy to read display
- Autoranging with 0.05% accuracy
- Includes battery and carrying case

Order No. HX386

Mfg. No.	ST-6236B
Photo Mode:	5 to 99,999 RPM
Contact Mode:	5 to 19,999 RPM
Surface Speed:	0.05 to 1999.9 MPM/0.2 to 6560 FPM
Accuracy:	±(0.05% + 1 digit)
Display:	5-digit LCD

LIGHT METER

- Accurately measures light levels from 0 to 5000 Foot Candles (Fc) and 0 to 50,000 Lux in 3 ranges
- Displays with resolution of 0.1 Fc and 1 Lux, respectively
- Easy to operate - simply switch to desired range
- Large 0.5" LCD readout displays to 1999 counts and indicates overrange
- Precision selenium photovoltaic cells and microprocessor provide for excellent accuracy of ±5%
- Sampling time of 0.4 second
- DATA HOLD switch allows you to retain displayed value
- Automatic zero adjustment
- Separate light sensor facilitates measurements in remote locations
- Built-in analog output of 1mV per count
- Ranges: 2,000, 5,000, 50,000 Lux; 200, 2,000, 5,000 Fc

Order No. HF979

Mfg. No.	K7020
Measuring Range:	0 to 50,000 lux; 0 to 5,000 Fc
Resolution:	1, 10, 100 lux; 0.1, 1, 10 Fc
Display:	LCD
Sampling Rate:	0.4 second
Power Supply:	1 x 9V battery
Dimensions:	163 x 70 x 30 mm
Weight:	220 g

STEM THERMOMETER

- 1" diameter pocket thermometer
- Easy-to-read LCD numerals
- Fahrenheit/Celsius switchable
- Range: -40° to 302°F (-40° to 150°C)
- Accuracy: ±2°F or ±1°C
- 5" stainless steel stem
- Immerse stem at least 1" for accurate readings
- Handy nylon case with shirt pocket clip included

Order No. HX502
Mfg. No. DT-130

Thermor

STEM THERMOMETER

- Large, easy-to-read LCD
- Fahrenheit/Celsius switchable
- Range: -40° to 450°F (-40° to 230°C)
- Accuracy: 0° to 230°F: ±1.0°F; <0°F: ±3.6°F; >230°F: ±3.6°F
- Resolution: 0.1°F/°C
- 5" stainless steel stem
- Handy nylon case with shirt pocket clip included

Order No. HD558
Mfg. No. PS100

Thermor

THERMO-HYGROMETER

- Dual LCD display shows ambient temperature and relative humidity
- Humidity Range: 10% to 95%RH
- Temperature Range: 0° to 50°C/ 32° to 122°F
- User selectable °C / °F
- Data Hold and Min/Max function
- Compact and lightweight
- Battery included

OPTIONAL ACCESSORIES:
Soft Carrying Case
Order No. HN413

REED

SPECIFICATIONS

Order No.	***HX287***
Mfg. No.	LM-81HT
Humidity Range:	10 to 95% RH
Humidity Resolution:	0.1%
Temp. Range:	0 to 50°C/32 to 122°F
Temp. Resolution:	0.1°C/F
Display:	Dual LCD, humidity and temperature
RS-232 Output:	-
Power Supply:	1 x 9V Battery
Dimensions:	156 x 60 x 33 mm
Weight:	160 g

THERMO-HYGROMETER

- Combination infrared thermometer and hygrometer
- Temperature Range: -50° to 500°C/-58° to 932°F
- Humidity Range: 0 to 100% RH, 0.1% RH resolution
- Fixed emissivity of 0.95 covers 90% of surface applications
- User selectable °C or °F
- Built-in laser pointer and 8:1 distance to spot ratio
- Large, easy to read backlit LCD with dual display
- Max and Hold functions
- Auto shut off
- Carrying case, humidity probe and 9V battery included

SPECIFICATIONS

Order No.	***HX384***
Mfg. No.	ST-616CT
Temperature Range:	-50 to 500°C/ -58 to 932°F
Accuracy:	±2%
Display:	Backlit LCD
Response Time:	< 1 second
Emissivity:	0.95 fixed
Distance to Spot Size Ratio:	8:1
Resolution:	0.1° up to 200°, 1° over 200°
Dimensions:	150 x 72 x 35 mm
Weight:	210 g

REED

THERMO-HYGROMETER

- Fast response time
- Dual LCD, displays ambient temperature and humidity simultaneously
- Humidity Range: 0% to 100%RH
- Temperature Range: -20° to 60°C/-4° to 140°F
- User selectable °C / °F
- Data Hold, Min/Max function and Auto shut off
- Carrying case and battery included

SPECIFICATIONS

Order No.	***HX375***
Mfg. No.	ST-321
Humidity Range:	0 to 100% RH
Humidity Resolution:	0.1%
Temp. Range:	-20 to 60°C / -4 to 140°F
Temp. Resolution:	0.1°C/°F
Display:	Dual LCD, humidity and temperature
RS-232 Output:	-
Power Supply:	1 x 9V battery
Dimensions:	200 x 45 x 33 mm
Weight:	200g

REED

DIGITAL THERMOMETER

- Temperature Range: -58 to 2000°F (-50 to 1300°C)
- User selectable °C or °F
- User selectable 0.1°C or 1°C (0.1°F or 1°F) resolution
- Accuracy to 0.5%
- Display maximum reading plus Data Hold
- Large LCD display with backlight
- Accept K-type thermocouples
- Includes 9V battery and holster
- **HX382** is a dual input thermocouple thermometer that provides differential temperature measurements

HX381

HX382

SPECIFICATIONS

Order No.	*HX381*	*HX382*
Mfg. No.	ST-610B	ST-612
Temperature Range:	-50 to 1300°C	-58 to 2000°F
Resolution:	1°C/°F or 0.1°C/°F	
Accuracy:	±(0.5 % rdg. ± 1°C/±2°F)	
Humidity Range:	0 to 100% RH	
Resolution:	0.1% RH	
Accuracy:	±3.5% RH	
Power Supply:	1 x 9V battery	
Dimensions:	165 x 76 x 43 mm (HWD)	
Weight:	403 g	

SURFACE PROBES

- Ribbon-style surface probe
- Maximum Temperature: 400°C

Order No. HN209
Mfg. No. LS-109

- Spring-loaded probe is ideal for high temperature surface measuring requirements
- Extremely fast response time
- Not recommended for use as an immersion probe
- Maximum Temperature: 500°F

Order No. HN210
Mfg. No. LS-139

RIGHT ANGLE SURFACE PROBE

- Unique right angle design allows temperature of hard to reach areas to be taken
- Great for monitoring temperature inside pipes, also flat surfaces, without keeping hands over heated area
- Maximum Temperature: 400°C

Order No. HN211
Mfg. No. LS-104

AIR/GAS PROBE

- Specially designed to measure air or gases in heating and cooling units, ovens and engine exhausts
- Perforated shield permits fasts response while providing exceptional element protection
- Maximum Temperature: 800°C

Order No. HN212 ***Mfg. No.*** LS-103

NEEDLE TIP PENETRATION PROBE

- Medium gauge hypodermic needle tip, used to measure softer food stuffs, rubbers and solids
- Ideal for use in industrial, laboratory and chemical environments
- Maximum Temperature: 800°F

Order No. HN213 ***Mfg. No.*** LS-134A

GENERAL PURPOSE IMMERSION PROBE

- Used to measure both air or liquids, but is best recommended for immersion applications
- Excellent for checking temperature of oils, water and non-corrosive fluids
- Maximum Temperature: 700°C

Order No. HN214 ***Mfg. No.*** LS-107

MINI INFRARED THERMOMETER

- Unique flat surface and modern housing design
- Wide temperature range from -50 to 280°C (-58° to 536°F)
- User selectable °C or °F
- Built-in laser pointer identifies target area
- Backlighting illuminates display for taking measurements at night or in areas with low background light levels
- Overrange indicator, Auto data hold (when trigger released) and Auto shut off
- Fixed 0.95 emissivity covers 90% of surface applications
- Includes battery and carrying case

HX242

SPECIFICATIONS

Order No.	***HX242***
Mfg. No.	ST-880
Temperature Range:	-50 to 280°C/-58 to 536°F
Accuracy:	±2%
Display:	Backlit LCD
Response Time:	< 1 second
Emissivity:	0.95 fixed
Distance to Spot Size Ratio:	8:1
Resolution:	1°C/1°F
Dimensions:	160 x 82 x 41 mm
Weight:	177 g

MINI INFRARED THERMOMETER

- Unique flat surface and modern housing design
- Wide temperature range from -50 to 550°C (-58° to 1022°F)
- User selectable °C or °F
- Built-in laser pointer identifies target area
- Backlighting illuminates display for taking measurements at night or in areas with low background light levels
- Overrange indicator, Auto data hold (when trigger released) and Auto shut off
- Fixed 0.95 emissivity covers 90% of surface applications
- Includes battery and carrying case

HX243

SPECIFICATIONS

Order No.	***HX243***
Mfg. No.	ST-882
Temperature Range:	-50 to 550°C/-58 to 1022°F
Accuracy:	±2%
Display:	Backlit LCD
Response Time:	< 1 second
Emissivity:	0.95 fixed
Distance to Spot Size Ratio:	8:1
Resolution:	0.1° up to 200°, 1° over 200°
Dimensions:	160 x 82 x 41 mm
Weight:	177 g

HIGH TEMPERATURE INFRARED THERMOMETER

- High temperature range to 750°C/1382°F
- User selectable °C or °F
- Built-in laser pointer identifies target area
- 12:1 distance to spot ratio measures smaller surface areas at a greater distance
- Unique flat surface and modern housing design
- Backlighting illuminates display for taking measurements at night or in areas with low background light levels
- Overrange indicator, Auto data hold (when trigger released) and Auto shut off
- Fixed 0.95 emissivity covers 90% of surface applications
- Includes battery and carrying case

HX245

SPECIFICATIONS

Order No.	***HX245***
Mfg. No.	ST-8819
Temperature Range:	-50 to 750°C
Accuracy:	±2%
Display:	Backlit LCD
Response Time:	< 1 second
Emissivity:	0.95 fixed
Distance to Spot Size Ratio:	12:1
Resolution:	0.1° up to 200°, 1° over 200°
Dimensions:	230 x 100 x 56 mm
Weight:	290 g